

Natural Swarming—Forming Nuclei.

G. M. DOOLITTLE.

The Hive Problem.

R. C. AIKIN.

AMERICAN BEE JOURNAL

43d Year.

CHICAGO, ILL., MARCH 12, 1903.

No. 11.

❖ A QUARTET OF APIARIES ❖

(See next page.)



Aplary of G. H. Wells, of Cass Co., Iowa.



Aplary of C. W. Virgin, of Stearns Co., Minn.



Aplary of Wm. W. Green, of Cook Co., Ill.



Aplary of Peter Gallee, of Ray Co., Mo.

THE AMERICAN BEE JOURNAL

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DR. C. C. MILLER, E. E. HASTY, EMMA M. WILSON

IMPORTANT NOTICES.

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Weekly Budget.

REV. JAMES M. SMITH, of Santa Barbara Co., Calif., writing us Feb. 28, said:

"My home was burned lately—total loss. The family were all away camping. My file of American Bee Journals and every book were burned."

We regret exceedingly to learn of Mr. Smith's heavy loss. Of course, many things undoubtedly held sacred as well as of pecuniary value are lost. Only those who have passed through such a "clean sweep" know anything about it. We hope but few will be called on to experience it.

Apiary of Wm. W. Green.

The picture shows my hobby at the height of its prosperity last summer—not high enough to be alarming—with "Yours truly" standing beside his crack colony.

My two little assistants, aged 8 and 9, show rather indistinctly near the edges of the picture.

I started keeping bees three seasons ago, purely for pleasure and recreation, and, I must say, that I have attained what I sought. Madam says she would like some honey, if you please, but I get all my pay before the crop comes off. Rather think my pay was the larger last year.

I have 26 colonies in a rather narrow city back-yard—whose limit will be about 36—and run for extracted honey, using Jumbo 10-frame hives (Draper barns)—and could not be induced to change for smaller. My field is very poor, one-half being Lake Michigan, and the other half so sandy that its product is small. The poor field brings me one blessing,

however—no foul brood within reach of my bees.

Being in the game for pleasure, I have experimented a good deal, mostly with the different races of bees. Last year I had pure Italians, blacks, and Cyprian queens Carniolan mated. So far the latter have come out the best, with Italians second. My data is as yet, however, too limited to be conclusive. One could not ask for a better bee than the Cyprio-Carniolan, first cross. The queens are very prolific, the bees tremendous workers, large, gentle, and uniformly marked, being distinguishable from three-banded leather-colored Italians. In the next generation the uniformity disappears, pure black bees appearing regardless of the mating of the young queen.

My only original feature is that I number the queens and not the hives. Each hive has a brass card-holder tacked on it with a numbered water-proof card therein, and when the queen changes her abode the card goes with her.

I clip all my queens, principally for the purpose of "branding" them. I am not troubled with much swarming, using such large hives, although some of my best queens—Cyprio-Carniolans—have needed more than one hive-body for a brood-chamber.

It is perhaps needless to add that the American Bee Journal has added greatly to the pleasure I have obtained from bee-keeping.

WM. W. GREEN.
Cook Co., Ill.

Apiary of C. W. Virgin.

Although my apiary is not very large, there is a whole lot of room for it to grow.

It was started from a swarm of bees found in the woods Oct. 26, 1901—the old empty hive which is on the right. They were taken home, kept in the cellar all winter, swarmed out twice, and the remaining swarm was then put into a hive.

From the first colony on the left I got 20 pounds of surplus; from the next enough stores to winter on; the third, and last colony, I have had to feed.

I have several more colonies that I found in the woods last fall, all in the cellar and doing nicely.

I got some of them home too late in the fall to feed; I don't know whether they have enough to winter on or not. I can see a few of the bees, and a little of the comb through a hole, but can not get in to them without splitting the stumps, and I don't want to do that until in the spring.

C. W. VIRGIN.
Stearns Co., Minn.

Apiary of Peter Gallee.

One afternoon, in 1896, when Peter Gallee, with a friend, returned from a stroll to his home his wife met him and said she was glad he had come, for she had caught a swarm of bees, and she wished him to put them in a box or something right away, else they might go off. Peter said, "That is best; let them go off," for he would not have anything to do with them. His friend said he could hive them, so they were put into a box—a colony of nice yellow bees. They swarmed, and the swarm was boxed. Now, Mr. Gallee got interested in the bees, and thought if he were going to keep bees and do any good with them they should be kept in something more convenient to handle, so he got some Langstroth hives and commenced to handle bees in a practical way, and produced section honey. The bees kept increasing so that other hives were needed, and he now uses lock-cornered hives with 8 Hoffman frames. Last year he had 35 colonies, spring count, and produced 2200 pounds of comb honey besides the increase. He has now about 65 colonies.

He winters on the summer stands by grouping the hives in twos, leaving the fronts open, but the sides, ends and tops are covered with straw, hay or grass, as is most handy at time of packing, the whole kept in place with four lath frames fastened with stakes and ties, with shade-boards on top to carry off the water. He sees that each colony has enough stores until spring, when he looks to their condition, and helps with a little feed, if needed. By this method very few colonies are lost in win-

tering, and what is very interesting is this: The colonies seem to get through with a small amount of stores, and we generally hear the first honey of the season is sold from this apiary in his district.

Mr. Gallee does not send off for queens, his apiary being from the original stock, excepting a stray swarm or two which may have come into his yard, so his queens are reared under the supersedure or else the swarming impulse.

His apiary is on the Missouri River, and he thinks if he had forage all around his bees would do still better.

Has any one an apiary started with one swarm of black bees, and not helped with queens from other apiaries to equal, or be better, than Mr. Peter Gallee's apiary?

RAY CO., MO.

JOHN S. SEMMENS.

The Apiary of G. H. Wells.

My son took the picture of the "Diamond Apiary" and me. Only 19 colonies appear, while we have 21, and on the most of them the diamonds show, being put on with vermilion paint, and each hive is numbered with black paint inside of the diamond.

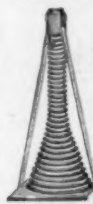
We began to study the bee-business two years ago, starting with one good colony badly hived, and one very poor one in a square box, so that both had to be transferred into good hives, which I did with the help of an old man that had handled bees for some years, but had not studied the business, so, of course, I have made some big mistakes; but I have tried to learn what I could by reading the bee-papers and books. One of the big mistakes I made was to take a very fine queen out of her hive (the colony had been hived June 2, and had given me 57 pounds of nice comb honey), and put in a young queen that I got from Texas, and she died, or was not to be found the next May. So I learned that when I have a good queen, and she is doing well, to let her alone, whether she has one band or three, although I have nine nice 3-banded queens.

Last year the bees in this vicinity did no good except in increase. I bought several young colonies, and at the close of the swarming-time we had 26, but we had to double them up because they did not build comb enough to hold syrup to winter on, so by putting two colonies together will be able to pull through. I fed them about 200 pounds of sugar, and then put them in the back chamber and darkened the window, but left it so I can give them plenty of air, and they seem to be doing nicely so far.

I think I would better raise them up from the bottom-board by putting a $\frac{1}{4}$ strip under the hive on three sides, and then put queen-guards in front to make sure the mice will not get in. Better be safe.

G. H. WELLS.
Cass Co., Iowa.

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ESTABLISHED IN 1861 AMERICAN THE OLDEST BEE-PAPER IN AMERICA BEE JOURNAL

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* Editorial. *

An Illinois Foul Brood Law is what the bee-keepers of this State are endeavoring to have passed during the present session of the Legislature. Referring to the matter, Secretary Moore, of the Chicago-Northwestern Bee-Keepers' Association, has this to say:

PARK RIDGE, ILL., Feb. 16, 1903.

DEAR BEE-KEEPER:—

The time has arrived when we can reach our representatives at Springfield and get a *Foul Brood Law* enacted. The Secretary of the Chicago-Northwestern Bee-Keepers' Association is in personal touch with more than half a dozen of the members of the Legislature now in session. About 70 of the members are from the city of Chicago and Cook County, and can be personally reached. It will be necessary to raise some money to pay postage and other necessary expenses. Every bee-keeper in Illinois (several thousand) must be reached by mail. The matter must be argued before committees of Senate and House. About \$300 may be needed to cover necessary expenses. Subscriptions so far are:

George W. York, \$25; Herman F. Moore, \$10; H. M. Arnd, \$5; Peter N. Duff, \$10; Mr. and Mrs. Frank Brown, \$5; Dr. C. C. Miller, \$5; J. A. Highet, \$1; Mrs. N. L. Stow, \$5; C. F. Kannenberg, \$5; G. E. Purple, \$5. The subscriptions will be used only to pay necessary expenses. The money will be expended by the executive committee of the Chicago-Northwestern Bee-Keepers' Association. The Association shall be custodian of the funds, and any surplus over what is needed to get the passage of the law will be placed in the treasury of the Association.

Now, send in your names and money, for we must have a *foul brood law* in Illinois, and now is our opportunity. The writer has had the honor of the friendship of the Hon. Henry W. Austin, of Oak Park—a member of the present Illinois House—for some years, and he is personally interested in the passage of this law.

Any one knowing of a member of either Senate or House who is interested in bees, will confer a favor by notifying the undersigned.

It will be well to have a number of the prominent bee-keepers all over this great State present when our Bill comes before the committees of the Senate and House. If only one or two were present they might think we did not amount to much. Watch the American Bee Journal, and we will keep you informed.

The Bill will go before the Legislature as a petition from the Illinois State and the Chicago-Northwestern Associations jointly. We ask an annual appropriation of \$1000 in our Bill.

Let all the bee-keepers in Illinois rally, and we shall have the law we so much need. Nothing can prevent it but the indifference of those most interested. Remember, you must act promptly, as the Legislature is now in session, and committees have been appointed.

Since the writing of the above the chairman

has been to Springfield and addressed both the Senate and House Appropriations Committees, to which our Bills were referred. Both committees gave us a very respectful hearing, and the House committee carried a motion to report it favorably to the House, and recommend that it do pass. The Senate committee had yet to act at the time the writer left Springfield, but it seems certain that they are favorably disposed to our Bill.

Now, any of the Illinois readers of the American Bee Journal, who can reach a member of either House or Senate before our Bill comes to a vote, please do so, as we need all the help we can get.

Pres. Smith, Sec. Stone, and Treas. Becker, of the Illinois State Bee-Keepers' Association, did some hard work before the committees. Mr. Stone had a hive, and Mr. Smith a frame of foul brood comb.

HERMAN F. MOORE,
Chairman of Foul Brood Committee,
Chicago-Northwestern Bee-Keepers' Association.
March 6, 1903.

Carpet-Grass (*Lippia nodiflora*) is lauded in *Gleanings in Bee-Culture* as a honey-plant of great value. Its name is suggestive of its appearance, and it flourishes where without it the ground would be bare. Stock eat it. It flourishes in nearly all parts of the West Indies. It has been lately introduced in the Bahamas, and is now the leading honey-plant there. W. K. Morrison thinks that sufficient perseverance would succeed in establishing it on the vast sandy wastes known as the piney woods of Florida, and Editor Root waxes eloquent after the following fashion:

If the sandy wastes in Florida could be covered with such a mass of green verdure, with its tiny little flowers so redolent of precious sweetness, what a transformation would be made! Verily, the desert would become a garden of Eden; and the happy hum of bees would gladden the hearts of many thousands of bee-keepers.

Giving Bees a Cleansing Flight is advocated by G. A. Deadman in the Canadian Bee Journal. He favors taking them out of the cellar and giving them a flight, say for this locality about the first fine day between the 5th and 10th of April, or possibly before if any prospects of early spring, and then putting them back again for perhaps two weeks or so. One object of this is to start brood-rearing, for bees do little at brood-rearing so long as they remain in the cellar. To be sure, they will start brood-rearing just as early if taken out at the time he suggests and left out; but he argues that during that two weeks' time many bees will be lost by flying when too cold for the bees to get back safely to the hives.

An item that Mr. Deadman does not mention, although no doubt well aware of it, is that the evils of confinement increase toward spring in something like a geometrical ratio,

and bees will suffer more during the last two weeks than perhaps during the first two months. If they can be relieved by a cleansing flight, and then do as well in the cellar afterward without any evil effects from that flight, there will be a gain.

But it has been pretty generally believed that bees thus returned to the cellar would be so uneasy that the evil effect of this would overbalance all the good results. If a large number of bee-keepers who cellar their bees will this spring try the experiment of taking out and returning a certain number of colonies, and then comparing their after welfare with that of the colonies remaining in the cellar till later, it will go a long way toward settling the question.

Testing Honey-Barrels.—To test honey-barrels before waxing, a bicycle-pump is recommended in *Gleanings in Bee-Culture* instead of blowing into the barrel with the breath.

Remedy for Laying Workers.—C. M. Aarons, in *Gleanings in Bee-Culture*, recommends that the larva be removed from one of the queen-cells started, and a worker-larva from a fertile queen put in its place. From this a queen will be reared. It is claimed by some that a virgin queen, when first hatched, is kindly received in any colony, even where a laying queen is present, and only when the virgin becomes a day or so old does jealousy arise between her and the reigning queen. If that be true, a good deal of time would be saved by giving the laying-worker colony a just-hatched virgin—if you have one.

Bee-Keepers Need the Scientist, says Arthur C. Miller in the *Bee-Keepers' Review*. It is too often the case that a bee-keeper of very limited experience puts that limited experience against the conclusions of the ablest scientist, rating the investigations of the scientist as something misty and unreal. To such a person the following wise words of Mr. Miller may be commended:

The scientist differs from the ordinary observer and student in degree rather than in method. The former proceeds with caution; testing, trying and weighing each step of his experiments; makes his observations as abundant as possible; compares the results of his work with those of others, when possible; and thus deduces from these what he believes to be "laws." The ordinary observer, on the contrary, proceeds less methodically; is content with less exhaustive experiments, and decides off-hand. But between the two extremes there are so many shades that he is a reckless individual who will say, "Here is the dividing line." So, let the scoffer beware, for he, himself, may be a truer scientist than the man at whom he scoffs.

Convention Proceedings.

Chicago-Northwestern Convention.

Report of the Chicago-Northwestern Bee-Keepers' Convention, held in Chicago, Dec. 3 and 4, 1902.

BY OUR OWN SHORTHAND REPORTER.

(Continued from page 149.)

JOINING THE NATIONAL IN A BODY.

Pres. York—While the tellers are counting the ballots we may as well proceed. What about joining the National in a body?

Dr. Miller—I move that this Association as a body unite with the National.

The motion was seconded, put, and carried.

Pres. York—The secretary tells me that this is Dr. Miller's time for an address. I don't know whether he brought it with him or not. I know he brought his wife!

Dr. Miller—I made my address several times this afternoon, and probably will repeat it before night.

Pres. York—We will take up the next question.

SQUARE OR TALL SECTIONS—WHICH?

"Which is preferable, square or tall sections?"

Pres. York—I think Mr. Huber Root could answer that pretty well, judging from what he knows about them.

Mr. Root—I don't know; it is a hard question to decide at all. I should prefer to let each one decide that for himself. I don't think that one man or one company of men could decide that for anybody. I think half would want square and half would want tall. It doesn't seem to me that we can decide that without an actual test.

Pres. York—How about Missouri, Mr. Leahy? Do they care anything about it down there?

Mr. Leahy—Unfortunately for Missouri we haven't had any honey this year. We sell more of the square sections than any other kind, but I attribute that largely to the hives. In the different States surrounding us they are fitted already for the square sections. I favor the taller sections myself, providing that they hold about the same as the $4\frac{1}{2} \times 4\frac{1}{2} \times 1\frac{1}{2}$ sections. The Baldwins, in Missouri, have been large producers of comb honey. They use a section $4\frac{1}{2} \times 5$. They get a little more for it, because people who buy it think they are getting a little more for their money. It is a larger section. I believe that we are drifting toward the tall section. My ideal section is the 4×5 . I would recommend that size. $4 \times 5 \times 1\frac{1}{2}$ is my idea of the ideal section. Then there are many that won't like to change their supers for the benefit that will come from a tall section. I do not like a real narrow, tall section. I never heard of any one that liked the $3\frac{1}{2} \times 5$, although some buy them.

Mr. Clarke—I would like to get an idea from some of those who have been using 4×5 sections in this locality, as to how their sections have been filled this season. This was a season that they can be tested. How many unfinished sections have they had this year? I mean in a locality where there has been a poor honey crop. It has been a wet season, and a good testing season for that.

Mr. Root—I just wish to say that I agree with everything that Mr. Leahy has said, and I think the 4×5 sections are coming up, although we sell more $4\frac{1}{2}$ square sections. Every man to whom we sent 4×5 sections sends in more orders, and I don't know of any one who ever used the 4×5 section who ever went back to the square, and that's taking the voice of the whole people, and not only a few.

Mr. Whitney—I have used both kinds. Two years ago I had an equal number of each, 4×5 and $4\frac{1}{2}$ square. The groceryman liked the 4×5 , but when I got out a section of honey and put it on a plate, and submit it to the ladies, they say, "Give us the square section." They thought it looked better on the table than the 4×5 . They weighed substantially alike. Of course, the 4×5 looks more like a window-pane. From all we see, it looks as if there was more honey in it, and the groceryman like it better because they think the tall sections sell easier, perhaps, and they can make a

fraction of a cent per pound more. I think they fill just about as the $4\frac{1}{2}$ square, no better I think.

Mr. Niver—I have been having quite an experience in that line in the last two months, buying honey up in Wisconsin. There is a transition state up there as to what was the preferred section, how they are going to change their supers. I talked it over with a good many bee-keepers, and tried to figure out some kind of a way. How are you going to do it? 4×5 sections will not fit their supers; $3\frac{1}{2} \times 5$ will, five rows of them; four rows of $3\frac{1}{2} \times 4\frac{1}{2} \times 1\frac{1}{2}$ is what we use in New York. They only fill a fancy section, weigh just about $\frac{1}{4}$ of a pound. That's what our idea is to get. The reason for that was, that it made an even 15 cents at the price it was then at retail. We were trying to work for the groceryman. We believed that he was our best friend, and we should work to get him suited in the best way to retail. We sold these sections for 12 cents, and he retailed them at 15 cents each. We never sold by the pound. I don't believe in that kind of work. That made our old supers so that we could use them. If you use any other size than 4×5 you have to put in blocks or wedges at the end, because it won't fit your supers, and it is a little difficult to figure and get them just right to suit everybody; but I think that $4\frac{1}{2} \times 4\frac{1}{2}$ are away back, especially if bee-keepers want to get to the tall sections, because it seems the fashion is running that way.

Mr. Wilcox—There is just one thing in Mr. Niver's remarks that I would notice. I have not had enough experience with the two in comparison to know which is the better, but the suggestion that he produces a $\frac{1}{4}$ -pound section, one well filled for the general market, is something worth knowing. If any great number do that it is quite possible the groceryman will seek it, and in time there will be a greater demand for that than there will be for an honest pound section, because they can sell that for a pound section. I am afraid if they do that they will either force those who produce honest pounds to come to the $\frac{1}{4}$ section, and the public will understand the facts, and the advantage gained will be lost. The price will be adjusted accordingly. At the present time we have the $4\frac{1}{2}$, and it has been the standard. When it was first brought forward by A. I. Root it was an honest pound, and, properly filled, it was. It has stood better than any other could, and I really believe that it is entirely satisfactory to the honest trade to-day, and if I should attempt to sell a 14-ounce section, or a 12-ounce section, and have it called a pound, I am afraid I would lose customers. I know there is somewhat of a demand among groceryman for something that is a fraction short, and they want to buy by the pound and sell by the piece. It is rarely that they find fault with 15 ounces to the pound—15 ounces to the piece, if you please.

Mr. Niver—We once had a two-pound section, and everybody used it, and there was quite a kick when we got it down to one pound. I don't know but an honest $\frac{1}{4}$ is just as honest as an honest pound. It is all the same. There is no pretension made in any section. When you come to the retailer he says, "Take your choice." He don't say, "Take a pound." It is just as honest to sell the man's $\frac{1}{4}$ -pound section, and the grocers think they can make more money out of their pieces. This question of dishonesty doesn't "cut any ice" when selling by the piece. If a man says they are all one pound, and they are $\frac{1}{4}$ of a pound, that is deception. Anybody can find it out. That old cry for an honest pound is like the political cry for an honest dollar.

Dr. Miller—Why is it that the general trade, the grocers, etc., prefer to have honey average just a little less than a pound?

Mr. Leahy—A 4×5 section, to my notion, fits on the super better than any other to put them crosswise. There isn't so much sagging to the holder of the section, and one thing that I like about a 4×5 section is, that where the super is not deep enough it is very easy to add a piece of wood around it. Dr. Miller has asked the question why it is that retailers, groceryman, wish to have a section weigh a little light. Any one who has handled comb honey in large quantities knows that a case of 24 sections that weigh 20 pounds net will sell quicker, and that the merchants will in some way or another get pay for 24 pounds, or he will charge just as much for a section that weighs 15 ounces as he would get for one that would weigh 16, only in the smaller way of selling a pound there is not much thought of an ounce. We make a great many cabbage crates, and if we can't make them up to weigh 23 pounds they don't want them, and I have asked them why they wanted them that way. "Well," they said, "we just make three pounds on the crate, and the cabbage is worth more than the

crate." In other words, when they sell a crate of cabbage they want to substitute three pounds of wood in place of cabbage, and the market recognizes that 20 pounds is the weight of the crate, and they force the manufacturer to make them that way or he can go out of business, and we haven't been able to make them heavy enough, so they bought heavy Southern gum, and heavy yellow pine, and when the small merchant buys his crates of cabbage they put in the crate at 20 pounds; it is customary. I don't know which would be the best way to get a plan whereby the wholesaler and the retailer can steal a little honey from their customers. I don't know whether we ought to allow them to do it. I know some consciences say, "We don't put it up that way;" and some do, and sell it quick, and get just as much per pound for it, if not a little more.

Mr. Kluck—I remember well when we had the two-pound sections, and when the $4\frac{1}{4} \times 4\frac{1}{4} \times 2$ section wasn't wanted. Now we have what we call the Ideal. That is $3\frac{3}{4} \times 5$, and they hold 12 ounces of honey. I have found that I can sell all my Ideal sections before I can sell any pound sections. Ask them so much a piece, well filled, and all practically alike, and I sell them all first. So much a section is a little lower than a pound, and they will take them all first, and they will all be sold first, and I think the time has arrived that we can sell the Ideal a long ways before selling the others. It is almost impossible to sell a two-pound section on the market. They all want the Ideal section, and, to my notion, it is going to be the leading section of the day. It will exactly fit an 8-frame hive. There is no fixing around to these.

Mr. Root—I would like to ask if we sold none but the Ideal if they would sell quicker than a given number of the $4\frac{1}{4}$ square? Isn't it because he has two sizes, and one is a little cheaper than the other that he sells the other first?

Mr. Kluck—The other is cheaper in regard to section, but dearer in amount of honey, and they would sooner pay more for less honey than for the other.

Pres. York—For the Chicago market there is no preference in sections. You can not get any more for a tall section than for a square one. I would also say that the grocery trade in Chicago almost unanimously demands light weight. We can scarcely sell sections that weigh a full pound. The grocers want sections that weigh 21 to 22 pounds to the 24 sections. I am speaking from experience, not heresay. I know nearly all the grocers refuse to buy heavy weights. They want them light weights.

Dr. Miller—Do they buy by section or weight?

Pres. York—They buy weight and sell by the piece. They seem to have gotten onto that trick.

Mr. Kluck—How does the Ideal section sell?

Pres. York—They are all "ideal" in one way, but we have practically no $3\frac{3}{4} \times 5$ sections here. I don't believe I ever saw more than one small shipment of that kind.

Mr. Baldrige—Is it not a fact that the dealers who have light-weight sections are trying to sell their cases by the case, instead of by weight?

Pres. York—Yes, I think that is true to a certain extent. They are trying to force them to buy by the case instead of by the pound. I received a market quotation from Kansas City, where the firm had changed the quotation from the pound to the case. It was the first notice I ever received from that commission firm. I could make a confession here about buying honey by the case wherein I was badly beaten, so I think I won't say anything further about it. I know I never want to buy any more that way.

Mr. Baldrige—I was in a wholesale house to-day, and they won't sell only by the case. They want us to pay for 21 pounds as much as we would pay for 23 or more.

Dr. Miller—There is one thing that was touched on in relation to this, and that is how to change from the supers we now use with a $4\frac{1}{4}$ to something that would take a tall section, and in what way would that change be made with the least expense. I think that all of the $4\frac{1}{4}$ supers can be changed to 4×5 , but I don't think you meant that as a case.

Mr. Leahy—If you will take them, any one of you who have the $4\frac{1}{4} \times 4\frac{1}{4}$ supers, and add a little rim at very slight expense, then you are ready for the 4×5 section. I don't believe there is any other way that you can change from the square to the tall section.

Mr. Niver—I would like to ask Mr. Leahy what width he would make his section?

Mr. Leahy—In speaking on that subject, I said my ideal section was $4 \times 5 \times 1\frac{3}{8}$.

Mr. Baldrige—With or without separators?

Mr. Leahy—If I were going to use them myself I would use separators, but I know very prominent bee-keepers who use them without separators, and produce very nice honey

by using starters. I would use them with separators, but not a 12-ounce section, but one about 15 ounces.

Dr. Miller—I think $4\frac{1}{4} \times 5\frac{1}{2}$ would bring you about the same as $4\frac{1}{4} \times 4\frac{1}{4}$.

Mr. Wilcox—I would like to ask Dr. Miller, or any other man, would there be a gain or a loss in using a thin section as against a thicker one, that is, in the storage, in the cost of it?

Dr. Miller—I don't know; that's easier asked than answered. I try to think, too, to a considerable extent. I think there is a loss. I think it will cost you more to store the same weight of honey in the tall sections than it will in the square. I am pretty sure I can say that far. It will cost more in the first place, you will have to use more foundation; and when you make a thinner section it costs you more unless you go beyond a reasonable thickness.

Mr. Niver—On that point I have had a good deal of experience. In our locality we find that the thin section not to exceed $1\frac{1}{4}$, they will cap and finish far better than they will a thick section. Our $1\frac{1}{4}$ we threw out because they must draw it out and carry the honey. They will carry it much quicker and cap it quicker, that's the reason we changed to a tall section. The bulk of our honey comes in August, and in order to get them finished and fit to sell, and capped over, we found it was to our advantage to have a thinner section, because the bees would cap them so much quicker in a little cool weather; but it might not be so in other localities.

RESULT OF THE ELECTION.

The election of officers resulted as follows: President, George W. York; Vice-President, Mrs. N. L. Stow; and Secretary-Treasurer, Herman F. Moore.

(Continued next week.)

Contributed Articles.

Natural Swarming—Formation of Nuclei.

BY G. M. DOOLITTLE.

A GAIN, as my custom is during the long winter evenings, I have been going over the summer numbers of the bee-papers, to see if there was anything of importance missed in the hurried reading necessary during the summer months, when there is so much to do. In this reading I came across something from the pen of one of our most practical men, which seems more like the mistake of a novice than otherwise; but as it appeared in the American Bee Journal, and, so far as I have seen, has not been noticed, I think I will call attention to it, as it may help some beginner to form correct opinions, and know more of how natural swarming is conducted. What I allude to reads as follows:

"Thus [when a prime swarm issues], the able-bodied members of the hive, accompanied by the queen, leave for a new abode, allowing the young bees to remain and rear a queen. Usually the preparations for emigration are begun several days ahead by the rearing of queen-cells, and, when the bees leave, the young queen is about to hatch."

In nothing pertaining to bee-keeping have I spent more time and study than I have on natural swarming, and if the above is right all of my study has been in vain. I find it this way:

When the colony becomes inclined to swarm, the bees form embryo queen-cells in which the old or mother queen deposits an egg, one in each, that are to produce queens. In due time these eggs hatch into larvae, which are fed royal jelly till the cells are sealed over. With the sealing of the first queen-cell (or cells) the swarm issues. This is the rule, and the exceptions are that the swarm sometimes issues on the day the eggs are laid in the queen-cells, or at about the time the first of the queen-larvae hatch.

Only under conditions of unfavorable weather have I known this rule and the exceptions to be violated. With the sealing of the queen-cells we have seven days intervening before the young queen emerges, so that it could not possibly be said that "the young queen is about to hatch." The only time when it could be said, would be when the swarm was kept back by foul or unfavorable weather. Where any of the first queen-cells are sealed between one

o'clock p.m. and six o'clock the next morning, a swarm may be expected during the next nine hours, if the day is favorable. Should there be high winds, cold or rain, the swarm will stay quietly in the old hive, and if such weather continues unabated for one, two, three, four, five, six or seven days, the colony may keep these queen-cells, and swarm on the first favorable day that comes; in which case should they be kept back from four to seven days, it might be truthfully said that the young queens were about to hatch or emerge from their cells. But not one swarm out of 500 ever issues under these circumstances, for by the time three or four foul days have occurred, the bees begin to feel poor from the lack of honey coming into the hive, give up swarming, tear down the queen-cells, and carry the embryo queens from the hive. But I have known, in one or two cases, the bees to preserve these young queens under unfavorable weather till the eighth day, when one or more of the young queens would emerge from their cells soon after the swarm had left; and one of these cases was this last summer, during which it rained 28 out of the 30 days in June, and 24 out of the 31 days in July. Then the writer says that the "young bees" are allowed to remain and rear a queen.

We often hear that the old bees go with the swarm, and the young bees remain in the old hive. This is as I find the matter: Bees of all ages, except those so young that they can not fly, accompany the swarm, and those of all ages stay with the old colony. Hundreds of times have I seen the ground in front of the hive covered with bees from six to ten hours old, all white and fuzzy, and too young to fly, that had tried to go with the swarm, and I never yet hived a swarm but what I could find hundreds of these young bees just a little older, enough so that they could barely fly, hanging in the cluster with the other bees, some of which were so old that their wings were nearly worn off. Nature makes no mistakes. If only old bees accompanied the swarm, these old bees would die of old age before any young bees would emerge from the cells in the newly-formed home, for where bees build their own combs, as they always do when combs are not supplied by man, it must be 23 to 24 days before many, if any, young bees appear, and this is more than half of the lifetime allotted to worker-bees at this season of the year.

DIFFERENCE BETWEEN PRIME AND FIRST SWARMS.

On page 539 (1902), I see I am asked to tell "what is the difference between a prime swarm and a first swarm." As I understand it, a prime swarm is a swarm that is perfect, or at its best at the time of issuing, or such a swarm as we have been talking about in this article, where the mother queen accompanies the swarm, which is composed of bees of all ages. A first swarm may be a *prime* swarm, and it may not be. In cases where the old or mother-queen dies in or about the swarming season, the bees will proceed to rear a queen from the brood left after her death, when, in due time, the first young queen will emerge from her cell and lead out the *first* swarm, which would be to all intents and purposes an *after-swarm*, except that it might have a larger number of bees with it than most after-swarms have.

If I wrote that a "prime swarm is often erroneously called a first swarm," such was done without fully considering the form of expression I was using. It should be expressed that a first swarm is often erroneously called a prime swarm.

FORMING NUCLEI.

On page 583 (1902), is an article from the pen of Dr. Miller, in which he conclusively proves that in his locality, and with his bees, it is possible to form nuclei from bees and combs taken from a colony having a laying queen, without taking any precaution as to keeping them from returning to their old home. In my former articles on this subject, I told just what had happened with me when I had tried such a plan, and I had supposed that bees would act the same with other people as they did with me, so, perhaps, I was too sweeping in my assertion, that were two bushels of bees taken from a colony having a laying queen, and placed in a new hive on combs of brood, without any precautions being taken, they would all stampede for home without leaving enough to form a decent nucleus. And that was just as I have found it, in conducting scores of experiments along this line, only the two bushels of bees were not generally used.

But last season gave me a surprise. As it rained nearly all the while during the month of June, when I must form my nuclei for queen-rearing, and not having enough queenless bees to form what I wanted, I, one day in my

desperation, formed some nuclei in just the way Dr. Miller says he did, and plenty of bees staid for them to "hold the fort." This seemed so strange to me, in view of my former experience, that I set to thinking, and I remembered that it had been over a week since the bees had flown, and for this reason quite a share of the bees taken did not know of any other home than the place they were put in. Besides this, it kept cold and stormy so they could not fly under three days after I formed these nuclei, so that this added much to their disposition to stay "where put."

But later on, when the bees were flying every day, I tried again in the same way, and had the same difficulty that I always had, of going to the nucleus hives the next morning only to find the combs deserted, except a few very young, fuzzy bees, the most of which had emerged from the brood in the combs given them.

I am not positive, but the reading of Dr. Miller's article above referred to, looks as if he might have formed his colonies (if not nuclei) by taking bees from several colonies having queens, and putting them together to form new colonies. If he did this, I should expect them to stay much better, for where I wish bees taken from a colony having a laying queen to stay where I put them, I take the bees from several colonies, mix them all up, and then form a colony of these mixed bees (small or large), and the larger part of them will adhere to the combs of brood in the new location. This mixing process seems to disconcert them, causing them to be so confused that they forget their anxiety to get back home, until they become accustomed to the surrounding circumstances. Onondaga Co., N. Y.



No. 3—The Hive Problem—More About Size and Shape.

BY R. C. AIKIN.

THERE is no doubt in my mind as to the failure of the present form of hive to fill the bill in results. As I have shown in the two preceding articles, the regular Langstroth hive is not as fully suited to our needs as might be, for wintering it is too wide—or rather long—for its depth, and is not easy to contract or expand. However, I believe if bee-keepers would use either 6 or 7 frames to the chamber, filling out the remaining space with dummies or followers, then at all times outside of the harvest flow carry them two deep, that better results would be accomplished.

I have for several years advocated the 10-frame hive for this territory, doing so because the 8-frame hive was too small. I have not changed my mind in the least as to size except to favor even larger than the 10-frame; I now think that very often a 12 frame is not any too much. I consider the shape of the Langstroth hive as not satisfactory, because it must be too large in its top surface to get proper depth without getting the hive too big during the harvest, so as a compromise, and to continue the use of that hive, I doubled up, thereby getting depth without enlarging the super surface. It is more natural for the bees to have the depth about twice the width, in any event have the depth considerably more than width and length. The Langstroth frame is too long, but used as I have indicated, two sets deep, it is not so bad.

One reason why I am adopting the 8-frame width, is because its width approximates the proper proportion as to height when the hive is two stories high, or one story with 2 or 3 supers on. A two-story Langstroth hive, whether the same depth is in brood-chambers or equivalent in supers or combination, is about 20 inches. If a little was cut off the end of the hive and put on its height, it would be almost ideal. With the hives of these proportions I am confident we can get better average filling of the supers, and there being but 24 sections instead of 28 they will be filled and ready to come off sooner. If one wants to keep supers on longer they can be raised and others put below, yet the travel over the finished sections raised to the top is reduced to a minimum. Still another advantage is that when a super is raised and a fresh one put under, work will be pushed more rapidly in the new one, and work going on freely in the super *always* lessens the crowding of the brood-chamber. If a colony can once be gotten to work in the super, we have in a very large degree gotten the control of that colony to keep down swarming, and to get steady and good super work.

To accomplish more nearly what I have just been outlining as to shape of hive, I am adopting a new divisible-

chamber hive, each chamber to have the capacity of about 4 Langstroth frames. In width it is the same as the 8-frame dovetailed, and its length 16 inches. The net measurements are 5½ deep, 12 wide and 161-16 long. The frame is 5x16, usual spacing and closed-end standing-style. The reason for adopting this size is that it will conform to the 4x5 section. I believe I can get better finish in the 4x5 section than in the 4½x4½—it conforms better by being higher than its width. If the sections would fit as well, and lumber would work as well, and covers were as easily made for a wider hive as for the narrower, I would prefer to have the brood-chamber the same in width each way, but 24 sections gives me so close to the ideal that I have settled on that shape—12x16 for length and width, and a 5-inch deep frame. Six-inch lumber will cut either super or brood-chamber, and the same body is to be used more or less interchangeable and for either purpose.

In using such a hive I have found some things that would not be expected. Suppose I have a swarm onto sections of this hive—its capacity 8 Langstroth frames—work will, as usual, be begun in the top section, and almost immediately I can put on a super and have it occupied. There is a tendency to work upward from the starting point, or rather to work above it. As I understand it, it is this way: The colony having started in the top or second section of the brood-chamber, if a super be then added above and honey is being stored, they feel that they ought to store the honey above the brood that is being reared, so that in practice I have had, when swarms were hived, the colonies to fill one section of the brood-chamber and one or more supers, and that when there was an empty brood-chamber below of 4 Langstroth frames capacity. I think it is unusual to get much super work over a set of frames in the Langstroth hives until there is no more room below in which to store.

The main points are in having a hive that conforms to the natural conditions as much as possible—one that when there is no super on will be to the best advantage and liking of the bees. As supers are on but a small portion of the year, why not have the hive so it will be normal the whole time, if possible, and not one or two months out of the twelve, and these one or two the very ones in which there is the less need of economy of heat, and of conformity to instinct and inclination of the bees. The greatest need, and the time that taxes the apiarist the most to succeed, is in the wintering and springing—if only we can get the bees for the harvest we can manage the harvesting problem. Give me the hive and system that will put more bees in the field for action in time for the flow, and I will very largely increase my profits. The great problem is to get ready for the harvest, and I want the hive that will help in that direction; that done, I will get the honey.

If Mr. Doolittle reads this he will no doubt try to ridicule my ideas, and say he doesn't want his bees brooding sticks and spaces as they would have to do when there are so many frames, and bottom and top bars all through the hive. I do not want them there, either, I would gladly do away with them if I could, but how can I? The same width and depth of hive serves the bees just as well if there be no sticks at all from cover to floor, but we cannot contract nor ever make a success of comb honey with the constantly deep brood-chamber, at least with present knowledge. I have used frames as deep as 15 inches, and as shallow as 4½ inches, *outside* measure, and I am making, and have made, a success of so very shallow frames. I have for several years had bees on a 4½ deep frames, and they make colonies equal to anything on Langstroth or Gallup frames. The sticks are an aggravation, and the people who so strenuously object to them do just as Mr. Doolittle does—have two sets of sticks between every two supers.

Mr. Doolittle kicks about a few sticks in the brood-chamber, and not so long ago stormed about the thick top-bars to brood-frames, but now he uses a great quantity of lumber in his top-bars and adds still more to it by having a space above these bars and above that another set of sticks before the bees come to the sections; and if he wants to put on a second super two more sets of sticks are between the first and second sets of sections. Objectors to the sticks and spaces, all overlook the fact that usually the colony is confined to the space between two sets of sticks at the season of the year when the economy of heat is most needed, for the greater part, and when the colony becomes strong enough to cross the sticks and cluster on both sides of them, then they can rear brood in a ten-bushel box about as well as anywhere.

I am not advocating a wholesale change of hives. I am not yet throwing away other hives to adopt the new-fangled divisible brood-chamber hive. I am using both 8 and 10

frame dovetailed, and other styles of Langstroth hives, American frames, and several others. It is after having used a great variety in style and size of hive and frame that I come to the conclusions that I have, but having seen the demonstration of the principles, I point out to the fraternity the findings that all who can may benefit thereby. There is a future for the shallow sectional style of hive which becomes in fact a large hive, but it is not going to put all other hives in the fence-corner at once. I am confident that those using 8-frame hives can make good use of that style and get the practical application of the large-hive principle just as I have out-lined by using two stories and then contracting, and I firmly believe that in nine cases out of ten it will be found quite profitable if properly applied.

The wintering troubles in the ordinary hive are in many cases largely overcome by the use of cellars, but the large hive and colony will go far toward solving the cellar-problem. I note that I am by no means alone in the elastic-hive question, and in the large-hive matter there is a host of believers. Mr. Doolittle has for years been advocating the same principles, but reaches the goal by another route. Larimer Co., Colo.

Our Bee-Keeping Sisters

Conducted by EMMA M. WILSON, Marengo, Ill.

Starting in Bee-Keeping.

I am suddenly thrown on my own resources for support, and as my home is in a rich alfalfa district I believe I could do well keeping bees, but I do not understand the business, and there is no one here from whom I can obtain instruction. I write you to know where I can go for thorough instruction in all departments of the business.

Would it be best to try for a situation with a skilled apiarist? I want to devote my time to the work, and get a practical knowledge of the business as thoroughly as I can, and as soon as possible.

MRS. E. K. HOFFMAN.

Phillips Co., Kan., Feb. 20.

You are fortunate indeed to be in a rich alfalfa district, if you are going into the bee-business, as large crops of beautiful honey come to bless those that live in the alfalfa districts. But there is another thing to be considered: Is the ground fully occupied by other bee-keepers? If so, it would be trespassing for you to start another apiary. It may be that the coast is entirely clear, in which case you are fortunate.

In some of the State agricultural schools they give instruction in bee-keeping, but I do not know whether they do or not in Kansas.

I think it would be the very best thing you could do to try for a situation with a skilled apiarist. Of course, the nearer home you could obtain such a position the better it would be for you.

You might try putting an advertisement in the American Bee Journal. I should think that would be the quickest way to obtain such a situation.

There are many things about the business that you must learn from the bees themselves, and if you are fortunate enough thus to get the benefit of the knowledge of a skilled apiarist, it will no doubt save you many dollars and cents. In the meantime, I should advise you to put in your time until spring studying a text-book, getting as thoroughly posted as possible in bee-lore. It will be a great help to you.

Water for Bees.

It seems a little out of season to talk about watering your bees, if, as in a good many localities, they are snugly housed in the cellar at the present moment. However, it is well to anticipate their wants. Indeed, there may not be any anticipation in the case where the bees are wintered out-of-doors. Just as soon as there comes a day warm enough for them to fly, one of the first things they will do is to start in search of water.

Bees are hard drinkers, and it is a matter of some importance that they have easy access to plenty of pure water

without being obliged to fly some distance to secure it. Especially is this true in the early spring when cold winds, sudden changes in temperature, etc., work such havoc with our bees. Water they must have, and if they do not have it supplied near home they must seek it elsewhere.

More bees are lost in the early spring by flying some distance, becoming chilled, and never getting back to their hive, than some bee-keepers are aware of. We don't want anything that will induce them to take long flights, much less anything that will oblige them to.

Bees are largely creatures of habit, and when once they have established a drinking place it is not so easy to change them from it. And one of their favorite selections is the watering-tank, causing much annoyance to stock, and to the people taking care of the stock as well. It is also a great nuisance to have them around the well or cistern pump. Especially is this the case if there are small children in the family.

All this bother may be avoided if we select their drinking place for them, and get them started in the right place before they have learned to go anywhere else. This is not difficult to do. A large jar filled with water, with a number of pieces of wood put into it for the bees to alight upon (if they are somewhat rotten all the better), is all that is needed to make a good watering place. If this jar is kept supplied with water after the bees once get started there will be no more trouble about their bothering you anywhere else. It is a good plan to put a little salt into it once in a while. Then it will not be a breeding place for mosquitoes, and the bees seem to like it better when it is a little salty.

Questions and Answers.

CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

(The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—EDITOR.)

Feeding Honey from a Dead, Mothy Colony.

I am a beginner in bee-keeping. I bought 2 colonies last October, but I had to kill one colony on account of having so many moth in it when I bought them. I have 6 store-combs half full of honey, from the hive of the colony I killed. Would it be wise to keep the combs for a swarm to start with, or would I better give it to the other bees to empty the comb?

PENNSYLVANIA.

ANSWER.—The probability is that it will be better to let the colony have the honey for spring use.

Absconding Colony—Observation Hive—Weak Colony—Keeping Queens.

1. June 26, 1902, I caught a swarm in the pasture on a fence-post, and I hived them in an old box, about 12 inches wide, and 2 feet long, and 8 inches high. I carried it home, and when I got there I turned the box upside down and the bees began to work there the same day, and 8 days after the first day the box was full of combs and some brood. Then I moved them about 2 feet from its old stand, and put a new dovetailed hive in its place with 8 Hoffman frames and division-board; then I took the box and dumped all the bees in front of the new hive. They began to work there the same day, but the other day they went to the woods. It was a big swarm of black bees. Why didn't the bees stay in the new hive as they did in the old box?

2. I have an observation hive that holds 1 Hoffman frame. I will put a frame with wired comb foundation in that hive, and have a little swarm in there, about June 26. Do you think they will rear brood and send out a swarm the same year they are hived?

3. Whom is Findland under? and what is the name of their King? Who is the King of Norway? Who is the King of England?

4. I had a weak colony of bees this fall, and put 12 pounds of uncapped honey on top of them, and on top of that a super of maple leaves. I put the colony in the cellar where the temperature is from 40 to 45 degrees. Do you think the bees will winter all right?

5. How long can I keep a queen before introducing her to a colony, after I receive her by mail? Where should I keep her?

MINNESOTA.

ANSWER.—1. If I understand you, the bees were put in the hive 8 days after June 26, and they staid there till "the other day," or about the first of February, as your letter is dated Feb. 9. The only reason I can suggest why a colony should desert its hive in the middle of the winter is that it was a case of starvation, or "a hunger-swarm." But I have some doubts about your having had weather warm enough for that, for their has been no day in this region warm enough for bees to

fly since early in the winter, and it is not generally warmer in Minnesota than here. So it is quite possible that I do not understand correctly, and, if so, please explain more fully and I'll try again.

2. They will rear brood, and they may send out a swarm, but the chances are against the latter.

3. These questions are outside the scope of this department. Not kings, but queens, are to be discussed here, and only those queens as are found inside of such palaces as measure less than two feet in each direction.

4. Maybe, and maybe not. Getting down to 40 degrees is not so well as to have it warmer. Make sure the bees are on the honey; for a cluster of bees half an inch below the honey, at 40 degrees, would starve.

5. I suppose you mean keep her in a cage. She may be kept a month or less or more, the time varying greatly. She should be kept somewhere where there will be summer temperature.

Cutting Out Queen-Cells and Swarming.

How would it be to cut out all of the queen-cells but one before they swarm? Would they swarm more than once then?

SUBSCRIBER.

ANSWER.—It might make some difference, and it might make none. A better way is to cut out all cells but one after they swarm. If only one is left there will be little danger of any more swarming.

Managing Virgin Queens.

Please tell me how to manage the virgin queens while taking their wedding-flight. Where a person wants to rear a few for his own use, say five or six will hatch from a choice queen and they take their flight in three to five days, one could be mated, but how about the others, and holding and getting them ready to be introduced to dark colonies, where the entrance-guards are on?

IOWA.

ANSWER.—The only way is to have each virgin queen in a separate colony or nucleus. If you have several in the same hive, there will at once be a fight to a finish, at least until all but one are finished.

Testing Honey for Adulterants.

Is there any simple way of finding the presence of glucose or other adulteration in extracted honey? "A B C of Bee-Culture" has a simple test for wax. There is a lot of honey on the market, in this vicinity, sold for pure honey, but some of us are unbelievers, and would like to test it.

MASSACHUSETTS.

ANSWER.—I know of no simple way of being sure whether a sample of honey is pure. One of the German bee-journals has for some time had a standing offer of I think not less than \$200 for a simple test that could be relied upon, but no one has secured the prize.

Transferring Bees—Ground-Cork for Winter-Packing—Observation Hive—Bee-Literature.

I am very much of an amateur at bee-keeping, 16 years old, having purchased my first colony only last fall, but I intend to go into the business more extensively as soon as possible.

1. My colony is in an odd-sized frame hive, and I wish to transfer to a 10-frame hive in the spring. Would it work if I were to get the queen and most of the bees into the new hive on full sheets of foundation, put a queen-excluding zinc between, and put the old hive above the new one? Would the bees take the honey below, or would the queen fill the cells as fast as made?

2. How does ground-cork rank as a winter-packing material?

3. Do the sides of an observation hive have to be covered with some opaque substance, or will the bees allow the light to penetrate their domicile at all times?

4. I have my hive facing the east. Would the bees do better in the summer if facing the south?

5. I have as reference bee-book "The Honey-Bee," put out by the Department of Agriculture, which seems to cover thoroughly all the essential points. Farmers Bulletin No. 59 on "Bee-Keeping" may be had for the asking, and is worth having. The larger book costs only 15 cents.

6. In Chamber's Encyclopaedia I see this statement: "The best and newest honey is a clear fluid contained in a white comb, while older honey is of a yellowish and even reddish tint." Does honey in white comb change color with time?

MINNESOTA.

ANSWERS.—1. Yes, it will work all right, only you must wait till the old hive is pretty well filled, perhaps about the time white clover is first in bloom. It matters little whether you get any bees below, if you get the queen there the bees will take care of themselves. Still, it may be a little better to have a fair force with the queen from the start. It is not likely that any honey will be carried down. It will rather be carried up, and as fast as cells are emptied in the upper hive by the hatching bees they will be filled with honey.

2. One of the very best, if not the best.

3. It is usual to keep the hive darkened when not under observation, but not absolutely necessary. Perhaps the bees will daub more propolis on the glass if the light be continuous.

4. When you get a second colony you can try it and see. I doubt if you will find any difference.

5. As I look out of my window just now, I see the ground covered with snow. If I were to say that all points in Illinois were covered with snow, you would be likely to tell me that I must not conclude that, just because there is snow as far as I can see. Just so as to all the essential points of bee-keeping. The works you mention are excellent as far as they go, but as you journey farther in the realm of bee-keeping you will find many points not covered by them, some of these points being essential to the best success in bee-keeping. I think I will be doing you a favor to advise you before your apiary attains very large proportions to secure one or more of the excellent text-books that cover the ground more fully.

6. Between you and me, "George," that doesn't sound as if that cyclopedia knew much about honey. Comb changes its color with time, if left in the hive, but when the honey is kept in good condition, either in or out of the hive, it remains of the same color. There is honey that is "of a yellowish and even reddish tint," but it has that tint when first gathered by the bees.

One who at 16 writes so neat a letter is likely to make a successful bee-keeper, for neatness is one of the most important things in bee-keeping.

Caging a Virgin Queen—Bees Died in Hive.

1. How can a virgin queen be caged and held before being mated?
2. I have 18 colonies, packed and well protected out-of-doors, but I just left the supers on the same as in summer. Now I notice 5 colonies are dead; they had enough honey to have lasted them until spring. They are in clusters between the frames and combs, just the same as though they had frozen to death. I began to rake the dead ones out with a stick, but the odor was so bad I could hardly work with them. Is it possible it is dysentery? I am sure I do not understand it, although it have worked with bees for 15 years.

ILLINOIS.

ANSWERS.—1. Perhaps from one to three weeks. But it is better to have the time just as short as possible. Caging doesn't do a virgin queen any good.

2. Yes, it is very possible dysentery or diarrhea is present, although it is barely possible that the honey is up in the super where the bees couldn't reach it, and so they starved to death. But in that case it hardly seems the odor should be so bad.

Taking a Colony Out of a Tree—Foul Brood.

1. I have found a colony of bees in a tree, about 15 feet high. What is the best way to get them out of the tree without hurting the bees?

2. Can I take the bees out of the tree in February? If not, when is the best time?

3. How can I tell when a colony of bees has foul brood?

MINNESOTA.

ANSWERS.—1. When it is warm enough for bees to fly you can fell the tree and then split it open, providing the fall does not split it. Better still, if you are willing to take the trouble, and conditions are favorable, cut off the tree just below where the bees are and let it down with a rope. Perhaps you can first cut off the tree above where you think the bees are, making it easier to let down.

2. If you fell the tree, better wait till it is warm enough for the bees to fly. If you cut or saw it off, letting it down carefully, you can do that in February; and if cut above and below the bees you may be able to haul the section of the tree with the bees to your home, setting it up as a hive to await warmer weather before getting the bees out.

3. You can tell by examining the brood to see whether you find present the symptoms described in your text-book.

Getting Bees from a Roof—Hoffman Frames—Increasing Fast—10-Frame Hive.

1. I have a colony of bees in the roof of a house. How can I hive them in a frame hive without taking up the roof?

2. What time would be the best to transfer them?

3. How would you winter bees on the summer stands?

4. Are the self-spacing Hoffman brood-frames the best?

5. What is the best way to increase bees fast?

6. How would the 10-frame dovetail hive be for comb honey?

ILLINOIS.

ANSWERS.—1. That depends altogether upon the circumstances. It is possible that there is no feasible way without taking up the roof. It is possible that you can get at them from inside without the least difficulty. If so, give them enough smoke so you can cut out the combs, then fasten these in frames, get the bees on them, making sure that you have the queen, then, when you've got all the bees, close the hole or holes through which they have been entering, so that not a single bee can enter.

2. Probably it would be well to do so as soon as the weather is warm enough for them to fly nearly every day.

3. Study up carefully all that is said on the subject in your text-book, and then adopt the measures that seem best suited to your conditions. If anything in the text-book is not entirely clear, ask all the questions you like in this department. As you are only a little north of latitude 41 degrees in Illinois, it is possible that bees would winter with very little protection of any kind, only so that there be something to prevent the wind from blowing directly into the entrance.

4. If bee-glue is not troublesome where you are you will find them excellent. If glue is plenty, they are bad.

5. There are a great many different ways of artificial increase, and what is best for one is not always best for another. If you are experienced sufficiently you will find the nucleus plan good. It would be out of place to give a full treatise on artificial increase in this department, and you will do well to study up the principles in your text-book. You will find the subject quite fully treated in the book "Forty Years Among the Bees."

6. For many it is excellent. Some like a still larger hive, but in that case they use for part of the year two stories of 8-frame hives.

Question on Queen-Rearing.

On page 760 (1902), Mr. Bartz has an article on queen-rearing. What is his object in using an excluder under the whole hive instead of an entrance-guard or queen-trap?

MISSOURI.

ANSWER.—I don't know what his object is, but the plan is good. It may be that he does it because the bees will have greater freedom than merely to have the entrance closed with excluder-zinc. Of course, the mere closing of the entrance with the zinc would prevent the issuing of the queen just as well, but it would give a better chance for air to have the excluder the full size of the hive and the entrance under it, especially if there is a deep bottom-board; and it would allow still better ventilation to have both hive and excluder raised an inch or so by a block under each of the four corners.

While you ought to secure excellent queens by the plan proposed, you must not be disappointed if in some cases the bees become dissatisfied with the queen for the continued failure to swarm, thus causing the loss of the queen. Neither should you expect to have queens as prolific as those mentioned by Mr. Bartz. Indeed, I think there must be some mistake if he means that each of his queens keeps 40 or 50 Langstroth frames filled with brood.

Pollen in Sections of Comb Honey.

1. What is the very best plan for a comb-honey producer to practice in order to keep pollen out of the sections?

2. Is it caused by hiving swarms on starters only? If so, what can we do to prevent it? I had quite a lot of very nice sections ruined with it the past season.

WISCONSIN.

ANSWERS.—1. I don't have very shallow brood-frames. Anything that tends to have the queen lay in the sections encourages pollen there, so queen-excluders are good to keep pollen out. But you don't need queen-excluders. I don't use them, and perhaps not one section in a thousand has pollen in it. Have thick top-bars, and fill the sections full of foundation. The thick top-bars make the queen less likely to go up. If you have only small starters in sections, the bees will build the drone-comb in them, and then the queen will go up to lay in the drone-comb, and pollen will follow.

2. Yes, if you have a swarm on small starters and give it the supers with sections well under way, the queen will be quite likely to go up in the supers. And she is likely to do the same thing if your brood-frames are filled with foundation. Either use a queen-excluder, or else don't give the supers till the bees have made a start in the brood-chamber and the queen has begun to lay there.

Weight of a Colony—Honey Candying in Unfinished Sections—Taking Bees from Cellar.

1. How much is the dovetailed hive—honey, comb, bees, etc.—supposed to weigh just before putting them into the cellar?

2. Is there any danger of the honey candying in unfinished sections before time for use next spring?

3. Is there any danger of the moth-millers getting in them? I have them in the supers all ready for use, stacked up in the honey-house. If so, what shall I do to prevent it?

4. When is the proper time to take bees out of the cellar here in Wisconsin?

5. How far apart is it best to have bees on the summer stands? and how far up from the ground?

6. What do you think of this locality (Polk Co.) for keeping bees?

WISCONSIN.

ANSWERS.—1. I want my 8-frame hives to weigh at least 50 pounds. Ten-frame hives ought to weigh 10 pounds more.

2. Yes, you may safely count that every one will candy.

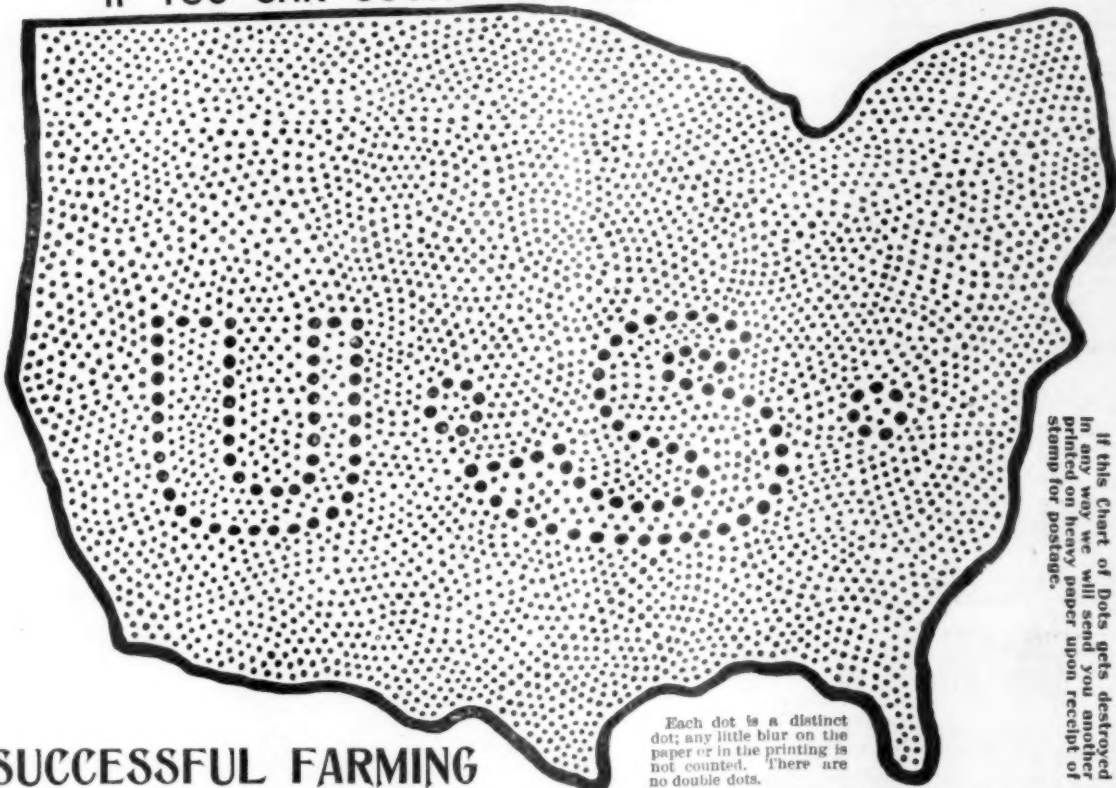
3. There is no danger of their making a start at this time of year, and if they are where they will freeze, that will kill not only the moths and the larvæ, but the eggs as well.

4. About the time red or soft maples are in bloom is a favorite time, providing the weather seems warm enough at that time.

5. Raise them 3 inches or more above the ground, and set them 6 feet apart from center to center each way, providing you have abundance of room. If room is scarce set them in pairs, the two hives of each pair almost touching each other, and leave a space of about 2 feet between the pairs, having the rows 6 feet apart or more. If you want to economize room still more, set the hives in pairs in a row as already mentioned, and then set another row close beside it, letting the hives of the two rows stand back to back.

6. I don't know anything about your particular locality, but Wisconsin, in general, is a good State for bee-keeping.

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CONDITIONS—The contest is open to all. Fifty cents pays for one full year's subscriptions to **Successful Farming**, and entitles you to one count; \$1.00 pays for two years and entitles you to three counts and makes you eligible for the grand **\$150 Special Prizes.**

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"I won \$100. all my own. It pays to enter your contests. They are surely conducted fairly.—E. M. Hall, Montrose, Mo."

We will send names and addresses of dozens and dozens who have won bicycles, watches, sewing machines, besides many larger premiums, to any body writing for them.



Please Note—There is no element of chance, of guess work or lottery about this. It is a test of skill pure and simple. If you can count the dots correctly you can win. The number of prizes is so large you are bound to hit it somewhere.

State Treasurer Gilbertson, Mayor Brenton and a Banker, They Will Select,

To Whom It May Concern: We know the publishers of **SUCCESSFUL FARMING** and can assure anybody interested that they will pay every premium they promise and treat every contestant fairly, showing no partiality. They have asked us to act as judges to award the prizes, and we will gladly act in that capacity.—G. S. Gilbertson, Treas. State of Iowa, and J. M. Brenton, Mayor of Des Moines.

Nobody connected with our paper is allowed to compete. Surely with such judges all may be assured fair treatment. You are as likely to win as anyone.

Key to Dots—To all who wish it and will write on separate sheet of paper "Send me key to dots," and sign your name and P. O. and enclose 10 cents to cover expenses, we will at close of contest send you a key to the dots showing just how many there are. Every contestant should order one, but it is not necessary unless you wish one. No key will be sent out until close of contest. Contest closes April 30, 1903, but get your counts in at once, the earlier the better. Contestants having three advance subscription counts entered may enter additional counts at 25 cents each. Address,

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My Count is: (1)..... (2)..... (3).....

Name.....
 (Have paper addressed to head of the family)

P. O. State

Remarks: My plan of counting is

What Yon Yonson Thinks

Vel, ay vent to Chicago to da grate Chicago an northwestern bee-keepers' meeting, an ay had plenty good time. All you bee-mans vot dident go you mist it plenty bad. An if you don't go next time you vil hit it da same vay ver you mist it dis time.

My goodness, ay fine out lots 'bout bees, an how to mak dom lay plenty hunny. An ay see lots of big bee-mans, but dom don't look so very big, an' dom don't seems to feel so very big, but dom iss plenty smart. An little bee-keepers lak Yon Yonson can yust sit still an' lern more as nobody elst. Da Nortwestern bee-keepers assoceating iss some plenty good ting, an if you give Mr. Moore, da man vat du da riting, von dollar, he yoin you in to deirs lodge, an da N. B. K. A., bote on da same time, so po das vay ve can kill 2 burds vid a von dollar bill.

It vas awful nice gurl at da convention; som rite lak sixty, an she rite down all vat dom sed, so Mr. New York print it in Merican bee-paper.

Yon Yonson never bin to Chicago before, so after da convenshal vas over, ay tank mebbly it iss better ay look around. So ay vent to stock show an' seen da hogs, cows, horses, an so on, an dom vas plenty nice. So ay go to da bord of trade, ver you know dom hav so many bulls an bears. Ay dont can understan' how dom can keep so many cattels an bears togedder, but mebbly its 'cause it iss different locality; but, mine goodness, ay vas too late, for dom yust sed amen. Ay look roun, but ay don't did see any cattels or bears, but ay herd feller vat sed some ting 'bout vattered stock, so ay tank mebbly dom drove dom cattles to da lake to drink, or mebbly dom bears ete dom cattles all up.

So, befor ay go home ay tank mebbly its better ay buy som lestel present for Mrs. Yon Yonson, so ay go into plenty big store an ay git some present, kine a cheep, of cours. Da klurk he akt awful nice an friendly, an vont Yon Yonson to buy hole pile ma flumy fixens, but dom don't kin fool Svede man po das vay.

Vel, ay don't got nuff change, so ay give him ten dollar bill, an he rite on a pece of paper, an he put my ten dollars in a little basket vat hang on a vire. An my for da good land, dat basket took crasy streak an yust run away ma hole ting. "My goodness," ay say, "You don't goan to play no Yank trick on Yon Yonson," ay say. So ay lit out holly hooping after da basket. "Hold on da," klurk say.

"Yes, you bet ay hold on to my ten dollars, if ay ketch das basket," ay say.

Da store vas ful ma vimens, but dom cleared da track ven dom see me after das basket. But dom don't got more sens dan to laff. But purty soon ay run rite over tree vimens, an ay fall down an bump my nose in da floor. My goodness, da yust hurt lak forty blases; an ven ay git up an pull my nose bak in shape ay don't kin see da basket. But von grate, big man feller he tak holt of me, an he say: "My goodness, hay-seed seems to be goan

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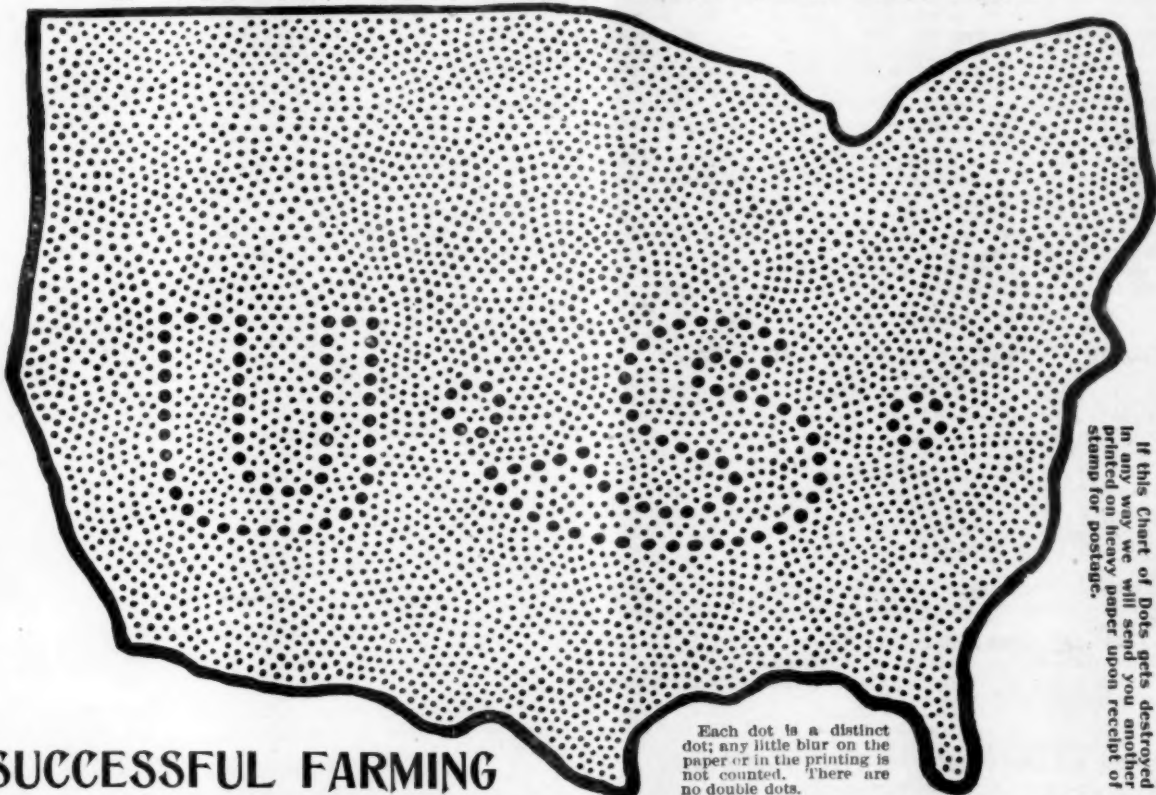
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Yon Yonson never bin to Chicago before, so after da convenshul vas over, ay tank mebbly it iss better ay look around. So ay vent to stock show an' seen da hogs, cows, horses, an so on, an dom vas plenty nice. So ay go to da bord of trade, ver you know dom hav so many bulls an bears. Ay dont can understan' how dom can keep so many cattels an bears togedder, but mebbly its 'cause it iss different locality; but, mine goodness, ay vas too late, for dom yust sed amen. Ay look roun, but ay don't did see any cattels or bears, but ay herd feller vat sed some ting 'bout vattered stock, so ay tank mebbly dom drove dom cattles to da lake to drink, or mebbly dom bears ete dom cattles all up.

So, befor ay go home ay tank mebbly its better ay buy som leetel present for Mrs. Yon Yonson, so ay go into plenty big store an ay git some present, kine a cheep, of cours. Da klurk he akt awful nice an friendly, an vont Yon Yonson to buy hole pile ma flumy fixens, but dom don't kin fool Svede man po das vay.

Vel, ay don't got nuff change, so ay give him ten dollar bill, an he rite on a pece of paper, an he put my ten dollars in a little basket vat hang on a vire. An my for da good land, dat basket took crasy streak an yust run away ma hole ting. "My goodness," ay say, "You don't goan to play no Yank trick on Yon Yonson," ay say. So ay lit out holly hooping after da basket. "Hold on da," klurk say.

"Yes, you bet ay hold on to my ten dollars, if ay ketch das basket," ay say.

Da store vas ful ma vimens, but dom cleared da track ven dom see me after das basket. But dom don't got more sens dan to laff. But purty soon ay run rite over tree vimens, an ay fall down an bump my nose in da floor. My goodness, da yust hurt lak forty blades; an ven ay git up an pull my nose bak in shape ay don't kin see da basket. But von grate, big man feller he tak holt of me, an he say: "My goodness, hay-seed seems to be goan

G. B. LEWIS CO., Watertown, Wis., U. S. A.

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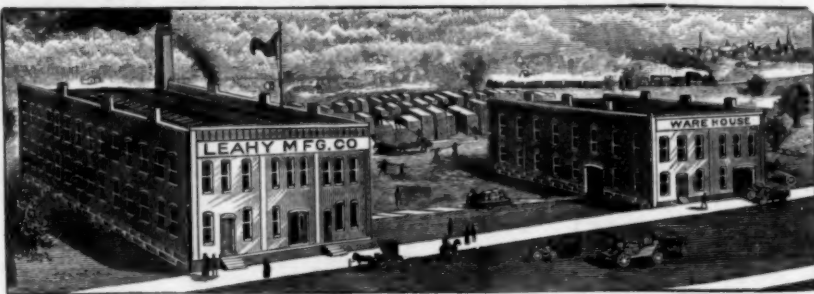
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This buggy is made of selected second growth split hickory—split, not sawed—and is a thoroughly high grade vehicle at a low price. It has heel braces on shafts, good carpet, full rubber top, solid panel spring back, 4-in. round edge steel tired wheels, boot on back of body, high leather dash, storm apron, side curtains, open hearth, oil tempered springs, Norway iron bolts and forgings, and many other points of merit. It is handsome and durable, and you can have your choice of oil and lead paint in colors.

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Catalog Free. Ronnd Rock, Tex.

down," he say. "Ay don't vont any hay-seed," ay say, "but ay von't das crasy basket vot run off vid my ten dollars," ay say.

"You cum along ma me," he say. An he tak me bak, an der vas da basket an my change. My goodness, ay don't kin see vy fore da basket tak such crasy spells an run all over da store. po das vay, so ay say good by, caus I don't care to stay long ver even da furniture git crasy spells. Da klurk he mak big smile, an he say, "Com bak agin, Unkel George." "All rite," ay say, "but if you don't voh out dat basket mebbay run avay da store an hole shutting match," ay say. "I'll keep an eye on da basket, Unkle George," he say. "My name bean Yon Yonson, an ay don't bean yours Unkel George," ay say. "But you iss a plenty nice feller, but if I bean so smart sun you, ay vont bean here nor no place elst," ay say.

But, my goodness, da bean lots ma peoples in Chicago, an every body on da street seems to be in plenty awful big hurry. An' dom yust go on da trot lak da vas fraid some von vas after dom ma sharp stick, an' dom don't say "how de du" to nobody. An' by da depo dom mans stan aroun ma nice buggies an vont Yon Yonson to ride. An in da depo it vas plenty sine vat say, "Beware of confidence men," caus in Chicago lection always go big majority for confidence, so ven ay start to go up town it vas awful nice feler, som say, "I vil carry yours grip, Unkle Rube," he say. But in his eyes da confidence yust stick out lak Philadelphia, so ay say, "I gess nit." "I show you da town," he say. "My goodness, do you tank ay vas bline?" ay say. "Don't I can see da town? Ay don't yust com off from white clover paster, an da grass don't grow fast nuf under my feet to go to seed," ay say.

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3. That the uncapping of the sealed honey be not delayed until the weather becomes so cool that the bees are compelled to stay in the brood-chamber a large part of the time.

I can see no advantage, but rather some disadvantage, in placing an empty hive-body between brood-chamber and super.

Although I was very successful in getting sections cleaned out in the way I have related, yet, in some instances, when a super full of sections seemed to be more than the colony needed, I would take out a part of the unsealed ones and place them, about sunset, at the entrance of the hive of some other colony that needed feeding. Doing this on

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GEO. H. STAHL, Quincy, Ill.



46A26t

Please mention the Bee Journal.

warm evenings the bees would clean them out during the night, or so early in the morning that no attempts were made at robbing.

If Miss Wilson has had such poor success after trying everything that I suggested, I own that I do not understand the reason why, and ask her to review her procedure and see if something was not omitted.

Piling up supers of unfinished sections to be robbed out by the bees of the whole yard is too wasteful a method to be practiced. Rather than give a large share of the honey to the colonies not needing it, I would put the honey on all the needy ones, and then if any sections remained uncleaned near the close of the season, I would pile these up and let the bees have access to them.

Mr. Hasty's answer to "Beginner" is rather discouraging. I wonder whether Mr. Hasty leaves the sections on the needy colonies and then does nothing else. I did so once, but not any more. If the sections are not isolated from the brood-chamber, and the sealed honey not uncapped, and this work not done while the weather is yet warm, it is likely you will not get many sections cleaned out.

EDWIN BEVINS.

Decatur Co., Iowa.

Wintered Well So Far.

Bees have wintered well so far, and have commenced to rear brood.

I can not get along without the American Bee Journal.

A. W. ATKERSON.

Jasper Co., Mo., Feb. 13.

Propolisin for Piles.

I will attempt to tell "Minnesota" (page 90) how to make propolisin:

Take propolis and olive oil enough to make it soft when mixed. Put into a vessel and heat slowly until the propolis is melted, then strain through a cloth and let cool. I suppose about 3 measures of oil to 1 of propolis would be about right; if too hard, add more oil. I got the recipe in Gleanings; I do not remember the page or date. Mrs. Rousseau has made some and used castor-oil. This is the best remedy for piles I ever knew anything about. Made with castor-oil it seems to be especially adapted for the cure of this disease. The way to use it is to cleanse the parts thoroughly with water warmed, then insert a lump at bedtime, and again in the morning.

L. C. ROUSSEAU.

Ellis Co., Tex., Feb. 11.

Fears Short Stores.

Last spring I bought 19 colonies of bees. They increased to 42 in spite of me, and gave me 590 pounds of comb honey. Two colonies starved, and another was eaten up by millers. I am afraid some of my bees went into winter quarters short of stores.

Polk Co., Wis., Feb. 2. V. A. HANSON.

Appear to Winter All Right.

I have been in the bee-business for the last 50 years, and now have more than 40 colonies. They did fairly well last winter. I winter them on the summer stands. To all appearances they are wintering all right. I am 74 years old.

RILEY SANFORD.

Wayne Co., N. Y., Feb. 16.

Dr. Gallup's Queen-Rearing Controversy.

I have been a bee-keeper for seven years, and read with delight Dr. Gallup's articles on rearing long-lived queens; also the counter articles of the breeders whom he has touched on the raw. The Doctor has set the ball in motion, and it will not stop rolling until his "unbilical cord" theory is proved or disproved. My sponsor is a bee-keeper of 37 years' experience, and he claims, of the hundreds of queens purchased, he has never received a queen, reared by any method or breeder, that has lived more than one year. Is this unusual mortality caused by rearing from worker-larvæ, or is it the sudden stoppage from laying, and consequent injury

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FRANK L. ATEEN,
Round Rock, Tex.

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3. That the uncapping of the sealed honey be not delayed until the weather becomes so cool that the bees are compelled to stay in the brood-chamber a large part of the time.

I can see no advantage, but rather some disadvantage, in placing an empty hive-body between brood-chamber and super.

Although I was very successful in getting sections cleaned out in the way I have related, yet, in some instances, when a super full of sections seemed to be more than the colony needed, I would take out a part of the unsealed ones and place them, about sunset, at the entrance of the hive of some other colony that needed feeding. Doing this on

To make cows pay, use Sharples Cream Separators
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If you were offered a hive that would save you one-half of your time and labor in its manipulations; one that would save you more than \$1.00 in costs of extras; or a double-wall hive for the price of a single-wall hive, would you not investigate its claims or merits? The 20TH CENTURY IDEAL does all the above. Then why not be on time and send for circulars to-day? See THE REVIEW for February, pages 48 (excuse errors on that page) and 60. Also GLEANINGS, pages 72 and 164. Book and hive are two of the grandest "hits" of the age. Order book NOW. Price, 25 cents; and your money back if you are not satisfied.

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46A26t

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warm evenings the bees would clean them
out during the night, or so early in the morn-
ing that no attempts were made at robbing.

If Miss Wilson has had such poor success
after trying everything that I suggested, I
own that I do not understand the reason
why, and ask her to review her procedure and
see if something was not omitted.

Piling up supers of unfinished sections to be
robbed out by the bees of the whole yard is
too wasteful a method to be practiced. Rather
than give a large share of the honey to the
colonies not needing it, I would put the
honey on all the needy ones, and then if any
sections remained uncleaned near the close of
the season, I would pile these up and let the
bees have access to them.

Mr. Hasty's answer to "Beginner" is
rather discouraging. I wonder whether Mr.
Hasty leaves the sections on the needy colo-
nies and then does nothing else. I did so
once, but not any more. If the sections are
not isolated from the brood-chamber, and the
sealed honey not uncapped, and this work
not done while the weather is yet warm, it is
likely you will not get many sections cleaned
out. **EDWIN BEVINS.**

Decatur Co., Iowa.

Wintered Well So Far.

Bees have wintered well so far, and have
commenced to rear brood.

I can not get along without the American
Bee Journal. **A. W. ATKERSON.**

Jasper Co., Mo., Feb. 13.

Propolis for Piles.

I will attempt to tell "Minnesota" (page
90) how to make propolis:

Take propolis and olive oil enough to make
it soft when mixed. Put into a vessel and
heat slowly until the propolis is melted, then
strain through a cloth and let cool. I sup-
pose about 3 measures of oil to 1 of propolis
would be about right; if too hard, add more
oil. I got the recipe in *Gleanings*; I do not
remember the page or date. Mrs. Rousseau
has made some and used castor-oil. This is
the best remedy for piles I ever knew any-
thing about. Made with castor-oil it seems
to be especially adapted for the cure of this
disease. The way to use it is to cleanse the
parts thoroughly with water warmed, then
insert a lump at bedtime, and again in the
morning. **L. C. ROUSSEAU.**

Ellis Co., Tex., Feb. 11.

Fears Short Stores.

Last spring I bought 19 colonies of bees.
They increased to 42 in spite of me, and gave
me 590 pounds of comb honey. Two colonies
starved, and another was eaten up by millers.
I am afraid some of my bees went into win-
ter quarters short of stores.

Polk Co., Wis., Feb. 2. **V. A. HANSON.**

Appear to Winter All Right.

I have been in the bee-business for the last
50 years, and now have more than 40 colonies.
They did fairly well last winter. I winter
them on the summer stands. To all appear-
ances they are wintering all right. I am 74
years old. **RILEY SANFORD.**

Wayne Co., N. Y., Feb. 16.

Dr. Gallup's Queen-Rearing Con- troversy.

I have been a bee-keeper for seven years,
and read with delight Dr. Gallup's articles on
rearing long-lived queens; also the counter
articles of the breeders whom he has touched
on the raw. The Doctor has set the ball in
motion, and it will not stop rolling until his
"unbilical cord" theory is proved or dis-
proved. My sponsor is a bee-keeper of 37
years' experience, and he claims, of the hun-
dreds of queens purchased, he has never re-
ceived a queen, reared by any method or
breeder, that has lived more than one year.
Is this unusual mortality caused by rearing
from worker-larvae, or is it the sudden stop-
page from laying, and consequent injury

from transmission through the mails? Let the breeders and laymen ventilate this question thoroughly. In the meantime, go on Dr. Gallup; if you are wrong you have performed a genuine service in opening this question; if you are right in your theory, you have been an incalculable benefit to bee-keeping posterity.

NORTON WAGNER.

Lackawanna Co., Pa., Jan. 31.

Best Flight in Two Months.

The bees are having a flight to-day, the first good flight for two months. They seem to be all right so far.

J. F. MICHAEL.

Randolph Co., Ind., Feb. 2.

Oregon and Washington for Bee-Keeping.

I notice on page 58 the above heading. I do not think there is any one man that can answer that question. Washington alone differs a great deal. It is a big State. While the eastern part of Washington is dry the western part, or coast, is extremely damp; they have lots of rain, but little or no snow. The bees can generally fly all winter. Blossoms are in abundance, but weather in which to gather honey is scarce. The bees generally begin to gather pollen the last days of February and the first days of March; but usually after that there comes a setback of rain which lasts sometimes until July, with but little good dry weather. Of course, there is some good weather, but the last four or five years have been remarkably wet.

Of blossoms here that give honey we have the salmonberry, thimbleberry, huckleberry, blueberry, blackberry or black caps; white, red, and yellow clover, dandelion and fireweed. And the trees that give honey are the vine-maple, crab-apple, barberry, soft maple, and a whole lot of others too numerous to recollect; besides fruit-trees and small fruit such as raspberry, strawberry, and blackberry. Cultivated berries do well here. It is rainiest near the coast, and diminishes as you go farther inland. The honey gathered, with or without water, is a good deal better than California honey; and I have sold my honey, put up in one-half gallon jars, for 60 cents per jar. This is all the information I can give about Washington, and it is also true of Oregon.

We live close to Columbia, and when we go to town we cross the river at Astoria, Ore. A map will show this is Wahkiakum Co., Wash., while Astoria is in Clatsop Co., Ore.

We have the first snow we have had in two years; it is 4 inches deep.

O. K. RICE.

Wahkiakum Co., Wash., Jan. 28.

Fears Heavy Loss of Bees.

My bees stopped breeding early last fall, and I fear a heavy loss this winter and spring on account of the age of the bees and the hard winter. They are on the summer stands, and have had but one good, cleansing flight during the winter.

H. W. CONGDON.

Monona Co., Iowa, Feb. 9.

Report for Two Years.

The year 1901 was a little better than the year before. Spring was a little backward, the bees built up fine after all, but the honey-flow was very short; they gave some surplus, and went into winter quarters in good condition. My bees came out in the spring of 1902 stronger in bees than they have since I have had bees, so this leads to great hopes; but, dear me, to think we should see the reverse! It was the worst spring for cold and wet weather, which seemed to blast all of our hopes. Our honey-flow comes here about the middle of June, but no honey was coming. The stores of the bees were on the decline. Weak colonies were starving and absconding their hives, leaving the brood. But all at once a change came the first week in July, when the honey came, and those colonies that had built up at that time did fair work, as it was a good flow all through July, and so this part of the country got a good crop of honey

Tennessee Queens.



Daughters of Select Imported Italian, Select long-tongued (Moore's), and Select, Straight 5-band Queens. Bred 3/4 miles apart, and mated to select drones. No bees owned within 3, and but few within 5 miles. No disease. 30 years' experience. **WARRANTED QUEENS**, 75 cents each; **TESTED**, \$1.50 each. Discount on large orders. Contracts with dealers a specialty. Discount after July 1st

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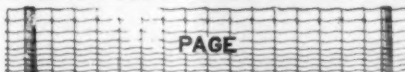


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after all, and the bees were in good condition for winter. So 1902 turned out all right, and I was satisfied.

I can not account for Mr. Doolittle's statement, that bees need no ventilation in the cellar more than they get through the walls. This is a puzzle to me. I have a tube in mine 8x7 inches, and it has not been closed one day all winter to this date. The inner door has been open nearly two weeks. The temperature is 44 degrees; a few mild days it run up to 48 degrees, and they were roaring. It was all right to open the other door at night, as it cooled them down to 38 degrees, and they were as quiet as could be; they could hardly be heard, so I do not see what I should do without ventilation. I believe that without ventilation my bees would come out and get lost on the cellar-bottom.

This winter I will make an experiment in two directions—first, in taking them in on Dec. 8 and 9, with the mercury 4 and 8 degrees below zero; second, with ventilator and inner door open; at this time they seem to winter all right, and so I hope for safe wintering, and a good honey season for 1903, so that we may secure a good crop.

C. H. VOIGT.

Keewaunee Co., Wis., Feb. 5.

Tartaric Acid and Granulation.

On page 78, Mr. C. J. Barber, of Monona Co., Iowa, wrote: "To prevent extracted honey from granulating, I put in a Mason jar a little tartaric acid." Will he please let us know how much that is in two quarts of honey (by weight or measure)?

ARTHUR SCHULTZ.

Dodge Co., Wis., Jan. 3.

One of the Old Bee-Keepers.

MR. EDITOR:—You have improved the American Bee Journal almost beyond measure. When I first took it—must be over 40 years ago when Wagner published it in Philadelphia—it was hardly a comparison to what you have made it to-day.

I venture to say I am the oldest bee-keeper on your list; I kept bees in Pennsylvania 25 years; came here after the war (1866), bringing bees with me, making it 37 years that I have been here.

It amuses me sometimes to note how singularly some persons write about their conclusions, as if they knew it all, and, no doubt, think they do, and may be correct from their standpoint, or their location; but, as a whole, or a combination of circumstances and locations, they are simply "off," and they would not believe it if the strict truth were told them. But "variety is the spice of life."

Fairfax Co., Va., Feb. 9. WM. URICH.

Northeastern Wis. Convention.

The bee-keepers of the Northeastern Wisconsin Association held their second convention at the residence of John H. Terens, in Manitowoc County, Nov. 8, 1902. The meeting was called to order by Pres. Terens at 10 a.m. As the Secretary was absent, Fred Jachimistal was appointed secretary *pro tem*.

Fred Trapp then read a paper on "Wintering and Ventilation of Bees," which brought out a good discussion, as all present were quite interested in the subject. After the discussion a vote was taken on which is the best way to winter bees, inside or on the summer stands. Six were cast for inside wintering, and 8 for outside wintering.

A paper was read by C. H. Voigt, on "Prevention of Absconding Swarms." After it had been fully discussed, John Cochems followed with "What Hive is Best Adapted to this Climate?" He wanted the 8-frame Langstroth. After discussing that topic it showed that the majority were in favor of the 10-frame Langstroth.

John H. Terens then gave a talk on, "Black or Italian Bees, Which are Better?" He did not think the Italians gathered any better honey than blacks; in his opinion the blacks would gather just as nice honey as the Italians, but he was in favor of the Italians, if for nothing else than their fine dress.

A committee of three was appointed by the

president to draft a program for the next meeting. A cordial invitation is given to those who may read this, and that live near, and are interested in bees, to meet with us on the date given in the program. The State foul brood inspector, N. E. France, has promised to be with us. We hope it will be an interesting meeting.

A vote of thanks was tendered Pres. Terens for his kindness in fixing up a room in which to hold our meeting, and offering the same again, if it was good enough, which offer was thankfully accepted.

The convention then adjourned to meet again on the date given in the program.

FRED JACHIMSTAL, Sec. Pro Tem.

The following is the program for the semi-annual convention of the Northeastern Wisconsin Bee-Keepers' Association, which will be held at the residence of J. H. Terens, of Mishicot, May 12, 1903, opening at 10 a.m. sharp:

1. Foul Brood—N. E. France.
2. Queen-Rearing, How Can the Most Profitable Queens be Reared?—L. C. Koehler.
3. Spring Dwindling—C. H. Voigt.
4. Which is the Most Profitable Hive for Wintering?—J. H. Terens.
5. Best Way of Marketing Honey—Fred Trapp.
6. Absconding Swarms—John Cochems.
7. Which is the More Profitable, Comb or Extracted Honey?—Fred Jachimstal.
8. Bee-Pasturage—V. Cloupek.

COMMITTEE.

CONVENTION NOTICE.

Michigan.—The Northern Michigan bee-keepers will hold a convention March 25 and 26, in Bellaire, Antrim Co., in the Town Hall. Special rates have been secured for entertainment at the Ellis Hotel, and also the Bellaire House, at \$1.00 per day.

GEO. H. KIRKPATRICK.

The Ormas Incubator.—Probably no reasonably priced incubator has a larger sale or a greater number of friends than the Ormas, advertised in this number. This machine is made of the best material, but being made in a small town where the cost of construction is reduced to the lowest point, it can be sold at a low price and yet be made of good material.

The sales double up every year, and now the Ormas is known all over the country as a



strictly first-class low-priced machine. It may truly be said of this machine that it is cheap in nothing but the price.

Mr. Banta has made a study of incubation and understands what is needed in building such a machine for the average operator. It is simple in construction, easy of operation, and sold on a guarantee as strong as such a document can be made. The catalog is a really interesting little book, and poultrymen should have it for reference. Send for it. Address L. A. Banta, Ligonier, Ind., and kindly mention the American Bee Journal when writing.

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For the season of 1903, or longer, to work with experienced manager of large apiary. State age, experience, references, wages expected, etc. Single man with ability to use carpenter's tools preferred. Address, P. E. G., care AMERICAN BEE JOURNAL, 144 E. Erie St., CHICAGO, ILL.



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And Several Other Clover Seeds.

We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express, at the following prices, cash with the order:

	5lb	10lb	25lb	50lb
Sweet Clover (white)....	\$.75	\$1.40	\$3.25	\$6.00
Sweet Clover (yellow)....	.90	1.70	4.00	7.50
Alaska Clover	1.00	1.80	4.25	8.00
White Clover	1.20	2.30	5.50	10.50
Alfalfa Clover80	1.40	3.25	6.00

Prices subject to market changes.

Single pound 5 cents more than the 5-pound rate, and 10 cents extra for postage and sack.

Add 25 cents to your order, for cartage, if wanted by freight, or 10 cents per pound if wanted by mail.

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HENRY ALLEY, Wenham, Mass.

51Atf Please mention the Bee Journal.

The Titus Nursery, Nemaha, Nebr., issues a very neat catalog entitled “How to Grow Fruit” that is bristling full of information gained by years of experience in growing fruit for the market. Every one of our readers who is interested in growing fruit should have this catalog, which can be obtained by addressing the firm, free of charge. This is a splendid book and is well worth sending for. Special attention is paid to the “Queen of all Apples”—Virginia Beauty—a large red winter apple of the finest quality. Virginia Beauty carried off first premium for the best new apple not previously shown at the late St. Louis Fair against 20 competitors. The Judge remarked, “It is the best flavored apple I ever sampled.” Please mention the American Bee Journal when writing.

HONEY AND BEESWAX

MARKET QUOTATIONS.

CHICAGO, March 7.—The demand for comb honey has been and is of small volume, prices are weak, concessions being made where necessary to effect sales. Fancy white comb held at 15@16c; all other grades of white are irregular at 13@14c; light amber, 10@12c dark and ambers, 9@10c. Extracted, clover and basswood, 7@8c; other white grades, 6@7c; amber, 5@6c. Beeswax steady at 30c.

R. A. BURNETT & Co.

ALBANY, N. Y., Feb. 20.—Honey demand quiet; receipts and stock light. Comb selling, light, 15c; mixed, 14@15c; dark, 13@14c. Extracted, dark, at 7@7½c. Beeswax firm, 30@32c.

H. R. WRIGHT.

KANSAS CITY, Feb. 21.—The demand for both comb and extracted honey is better, receipts light. We quote as follows: Extra fancy white comb, per case, \$3.40; strictly No. 1, \$3.30; No. 1 amber, \$3@3.25; No. 2, white and amber, \$2.50. Extracted, white, per pound, 7c; amber, 6@6½c. Beeswax, 30c.

C. C. CLEMONS & Co.

CINCINNATI, Feb. 7.—The demand for all kinds of honey has fallen off considerably in the last few weeks, owing to the many other sweets offered at this season of the year. Lower prices are no inducement to increase the consumption, as the demand is not there, and will not be until about the end of the month; consequently it is folly to offer at lower prices. We quote amber extracted in barrels at 5½@6½c; white clover and basswood, 8@9½c. Fancy white comb honey, 16@17c; lower grades hard to sell at any price. Beeswax firm at 30c.

THE FRED W. MUTH CO.

NEW YORK, March 5.—There is a fair demand for white comb at 15c per pound for fancy, 13@14c for No. 1, and 12c for amber, with sufficient supply to meet the demand. Dark honey will be cleaned up with very little left; it is selling at about 11c per pound. Extracted rather weak and in quantity lots, prices generally shaded. We quote: White, 7@7½c; amber, 6½@7c; dark, 6c. Beeswax scarce at 30@31c for good average.

HILDRETH & SUGLEMAN.

CINCINNATI, Mar. 7.—The comb honey market has weakened a little more; is freely offered at following prices: Fancy white, 14@15c; no demand for ambers whatever. The market for extracted has not been changed and prices are as follows: Amber in barrels, 5½@5½c; in cans 6@6½c; white clover, 8@8½c. Beeswax, 28@30c.

C. H. W. WEBER.

SAN FRANCISCO, Jan. 14.—White comb honey, 11½@12½c; light amber, 10@11c; dark, 5@6½c. Extracted, white, 6@6½c; light amber, 5@5½c; amber, 4@4½c. Beeswax, good to choice, light, 26@27½c; strictly fancy light, 29@30c.

The country merchant, representative of trade interests, estimates “entire stock of honey of 1902 in the State at 15 cars,” worth 5½@6c per pound at primary points, subject to a \$1.10 freight-rate to the East.

WANTED WHITE CLOVER EXTRACTED HONEY!

Send sample and best price delivered here; also Fancy Comb wanted in no-drip cases.

THE FRED W. MUTH CO.

32Atf Front and Walnut, CINCINNATI, OHIO.

Please mention Bee Journal when writing

Honey For Sale.

2000 lbs. Basswood Extracted honey, at 9c a pound. All in 60-lb. cans. Warranted PURE HONEY. JOHN WAGNER, BUENA VISTA, ILL.

5Atf Please mention the Bee Journal.

For Sale

Choice Alfalfa Honey (granulated) in 11½-lb. cans, at \$8.00 per case of 8 cans, f.o.b. Cedar Rapids, Iowa.

11A2t H. L. WEEMS, Cedar Rapids, Iowa.
Please mention Bee Journal when writing

For Sale

10 Danzenbaker bodies, 5 supers, lids, bottoms, 50 Danz. brood-combs, 500 Danz. sections, 50 Langstroth hives good as new. Cheap. 5 colonies bees.

R. & W. BINKERD, W. Monterey, Clarion Co. Pa.

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The Best Bee-Goods in the World....

are no better than those we make, and the chances are that they are not so good. If you buy of us **you will not be disappointed.** We are undersold by no one. Send for new catalog and price-list and free copy of THE AMERICAN BEE-KEEPER; in its thirteenth year; 50 cents a year; especially for beginners.

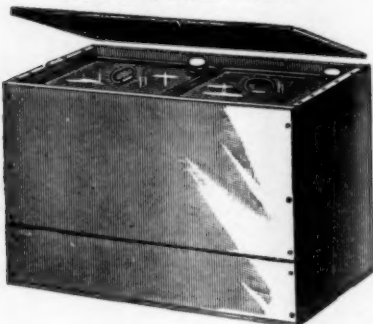
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W. T. Falconer Mfg. Co.,
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W. M. GERRISH, Epping, N. H., carries a full line of our goods at catalog prices. Order of him and save the freight.

Please mention Bee Journal when writing.

Only 8c a lb. FOR THE BEST White Alfalfa Honey

ALL IN 60-LB. CANS



A sample by mail, 10c for package and postage. By freight, f.o.b. Chicago: 2 cans in box (120 lbs.) at 8 cents a pound. We can furnish Basswood Honey at $\frac{1}{2}$ c a pound more.

This Alfalfa Honey should go off like hot-cakes. Better order at once, and get a good supply for your customers.

GEORGE W. YORK & CO.,
144 & 146 E. Erie Street, CHICAGO, ILL.

OMAHA, NEB.
We carry a complete stock of HIGGINSVILLE BEE-SUPPLIES at the above place. Our Neb. customers will save considerable freight by ordering from them. Kind and courteous treatment, low prices and prompt attention our motto.

Address, **LEAHY MFG. CO.,**
Catalog Free. 1730 S. 13th St., Omaha, Neb.
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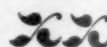
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Very fine pure-bred BARRED PLYMOUTH ROCK Chickens and Eggs for sale at very low prices.

Langstroth on the Honey-Bee—Revised,
The classic in Bee-Culture—Price, \$1.20, by mail.

BEESWAX WANTED
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DADANT & SON,
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If You are a Bee-Keeper you are Interested in Smokers.

Don't you want one that will hold fire indefinitely, and that will respond instantly with a good volume of smoke even if you haven't been using it for half an hour or more? Then get a CORNEIL or a VESUVIUS.

Have you ever been bothered by a nozzle flying open and spilling the fire just when you needed it most? Then get a CORNEIL, the nozzle of which will not fly open, or get a VESUVIUS, which has no removable nozzle.

Have you ever burnt your fingers on a hot nozzle? Then get a CORNEIL.

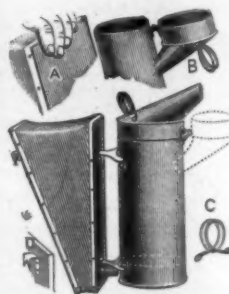
Did you ever have the grate fill up? Then get a CORNEIL or a VESUVIUS, which have removable grates.

Do you have trouble in lighting your smoker? Then get a breech-loading VESUVIUS.

Do you like a small, light, smoker? Try the Junior CORNEIL. Do you like a large smoker that will not need reloading for hours? Then try a Jumbo CORNEIL.

Do you like brass smokers that will not rust? Then take your choice of a VESUVIUS or three sizes of the CORNEIL.

Do you often wish that something could be put on the bellows to give your fingers a better hold? Then try one of our smokers which are bound with folded tin in such a way as to give much better hold than any slot cut in the wood.



PRICES.

Jumbo Cornell 4-inch\$1.25 each;	3.....\$3.45;	postage.....\$.25
Standard " 3 1/2-inch85 each;	3..... 2.25;	postage..... .25
Junior " 2 1/4-inch65 each;	3..... 1.80;	postage..... .25
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All brass smokers, 25 cents each.



Artificial Queen-Cell Cups.

EVERY bee-keeper who rears queens by the Doolittle method, knows how tiresome it is to dip the cells; it takes time, and they are not uniform. Have you ever thought how convenient it would be to have ready-made cell cups for queen-rearing?

We have lately begun to make these by a different method altogether, whereby all are uniform and perfect. The base is thick enough to withstand any reasonable amount of hard usage, and the top has a veritable feather-edge.

We are prepared to furnish a hundred of these cell-cups to every new subscriber who sends us a dollar for a year's subscription to Gleanings. Old subscribers may also take advantage of this offer by paying up all arrears and ordering Gleanings one year in advance.

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